

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of the claims in the application.

### LISTING OF CLAIMS

1. (Currently Amended) A computer-implemented method for ~~compressing~~  
~~transmitting~~ a first stream of data through a network, ~~said first stream of data comprising a~~  
~~plurality of input words~~, from a source node to a destination node via a plurality of intermediate  
nodes, comprising:

ascertaining using given node of said plurality of intermediate nodes whether packets  
associated with said first stream of data is compressed upon arriving at said given node of said  
plurality of intermediate nodes;

if said packets associated with said first stream of data are not compressed upon arriving  
at said given node, performing adaptive compression on said packets associated with said first  
stream of data in accordance with a first adaptive compression/decompression technique at said  
given node to form compressed data packets and transmitting said compressed data packets to  
another node of said plurality of intermediate nodes; and

if said destination node does not include a decompression engine capable of  
decompressing said compressed data packets in accordance with said first adaptive  
compression/decompression technique, decompressing said compressed data packets at a  
downstream node of said plurality of intermediate nodes to obtain uncompressed packets  
associated with said first stream of data prior to providing said uncompressed packets to said  
destination node, said downstream node represents one of said plurality of intermediate nodes  
that is downstream of said given node in the communication path between said source node and  
said destination node.

~~receiving said plurality input words;~~

~~adaptively compressing said plurality of input words into a plurality of~~  
~~compression codes; and~~

~~outputting said plurality of compression codes upon encountering an end-of-file~~  
~~signal in said first stream of data, wherein said plurality of compression codes are fewer in~~  
~~number than a number of said plurality of input words.~~

2. (New) The method of claim 1 wherein said source node represents a node that does not have a compression engine capable of compressing said packets associated with first stream of data in accordance with said first adaptive compression/decompression technique.

3. (New) The method of claim 2 wherein said destination node represents a node that does not have said decompression engine capable of decompressing said compressed data packets in accordance with said first adaptive compression/decompression technique.

4. (New) The method of claim 2 wherein said destination node represents a node that does not have said decompression engine capable of decompressing said compressed data packets in accordance with said first adaptive compression/decompression technique.

5. (New) The method of claim 1 wherein at least one of said plurality of intermediate nodes is a legacy node that does not have either a compression engine capable of compressing said packets associated with said first stream of data in accordance with said first adaptive compression/decompression technique or said decompression engine capable of adaptively decompressing said compressed data packets in accordance with said first adaptive compression/decompression technique.

6. (New) The method of claim 1 wherein said performing said adaptive compression is performed using hardware.

7. (New) The method of claim 1 wherein said performing said adaptive compression is performed using software.

8. (New) The method of claim 1 wherein said performing said adaptive decompression is performed using hardware.

9. (New) The method of claim 1 wherein said performing said adaptive decompression is performed using software.

10. (New) The method of claim 1 wherein said given node represents a packet-based router.

12. (New) The method of claim 1 wherein said given node represents an Internet router.

13. (New) The method of claim 1 wherein said given node represents a local area network (LAN) router.

14. (New) The method of claim 1 wherein at least one of said packets associated with said first stream of data and said compressed data packets are marked to ensure that said performing said adaptive compression only occurs once along the path between said source node and said destination node.

15. (New) The method of claim 1 wherein at least one of said packets associated with said first stream of data and said compressed data packets are marked to ensure that said performing said adaptive decompression only occur once along the path between said source node and said destination node.

16. (New) The method of claim 1 wherein said given node and said downstream node represent routers disposed at the network edge of said network.

17. (New) The method of claim 1 wherein said given node represents a network switch.

18. (New) A computer-implemented method for transmitting a first stream of data from a source network interface card (NIC) to a destination NIC via a plurality of intermediate nodes that includes a plurality of Internet routers configured for routing data packets, comprising:

ascertaining using given node of said plurality of intermediate nodes whether packets associated with said first stream of data is compressed upon arriving at said given node of said plurality of intermediate nodes;

if said packets associated with said first stream of data are not compressed upon arriving at said given node, performing adaptive compression on said packets associated with said first stream of data at said given node to form compressed data packets and transmitting said compressed data packets to another node of said plurality of intermediate nodes, said performing said adaptive compression includes marking said compressed data packets to ensure that said adaptive compression is performed only once in the path between said source NIC and said destination NIC; and

if said destination NIC does not include a decompression engine capable of decompressing said compressed data packets, decompressing said compressed data packets at a downstream node of said plurality of intermediate nodes to obtain uncompressed packets associated with said first stream of data prior to providing said uncompressed packets to said destination NIC, said downstream node represents one of said plurality of intermediate nodes that is downstream of said given node in the path between said source NIC and said destination NIC.

19. (New) The method of claim 18 wherein said given node represents an Internet router.

20. (New) The method of claim 18 wherein said given node represents a local area network (LAN) router.